

**AGENDA ITEM V B**

**PROGRESS REPORT ON CONDITIONALLY APPROVED UNIT**

**SOUTHEASTERN LOUISIANA UNIVERSITY**

**INSTITUTE FOR BIODIVERSITY AND INTERDISCIPLINARY STUDIES  
(IBIS)**

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##### **BACKGROUND INFORMATION**

Southeastern Louisiana University (SLU) seeks continued Board of Regents' approval for the aforementioned institute. This Institute was granted full approval (five years) by the Board in April 2003, when the Board acted as follows:

**Full approval is granted for the Institute for Biodiversity and Interdisciplinary Studies (IBIS) at Southeastern Louisiana University for a period of five years from this date.**

The request for reauthorization was received by staff in June 2008. The University requests continued approval through June 2010, at which time current, external funding will expire.

##### **STAFF SUMMARY**

#### **1. Description**

In its documentation, the University describes the Institute as follows:

*One of the greatest environmental threats in the coming century will be the loss of biological diversity on Earth. It is estimated that fully one-third of the life forms in the United States are at risk of or in imminent danger of extinction (Pitman and Jorgensen, 2002; Bryant, et al., 1997; Groombridge, 1992). The primary cause of these rates of extinction is the loss of natural habitats from a combination of deforestation, agriculture, desertification, urbanization, and other human related activities. Unless dramatic remedial steps are taken, the legacy of the coming century could very well be a country and a world substantially depleted of the diversity of life. A world-wide coordinated effort will be required to minimize the loss of biological diversity (Myers, et al., 2000; Noss and Cooperrider, 1994; Pressey et al., 1993). Within the Lake Pontchartrain Basin, there are significant environmental issues that pertain to the continual and dramatic degradation of wetland habitats which, consequently, impact negatively on the sustainability of biodiversity. Since its inception five years ago, Southeastern's Institute of Biodiversity and Interdisciplinary Studies (IBIS) has concentrated its resources and collective expertise on investigations of the biotic and abiotic factors that affect the stability of wetlands within the Lake Pontchartrain Basin, a complex ecosystem that is recognized nationally as a haven of biodiversity and for its economic and cultural significance.*

*Southeastern is requesting permission to continue the IBIS as a University of Louisiana System and Louisiana Board of Regents recognized institute. IBIS was established in 2003 to address the numerous complex issues associated with biodiversity and habitat restoration within the Lake Pontchartrain Basin through research, formal and outreach education, and policy recommendations. The Lake Pontchartrain Basin forms one of the largest and most important oligohaline coastal ecosystems in the United States. IBIS, through its diverse research efforts, is attempting to determine the ecological stresses, including those associated with human behavior, on the Lake Pontchartrain Basin ecosystem and to provide scientific information to decision makers and stakeholders on methods and policies to stabilize, sustain, and/or enhance its environmental and economic recovery. IBIS strongly encourages intra- and inter-institutional and interdisciplinary collaborations as mechanisms for an integrative approach to the ecological investigation of the Lake Pontchartrain Basin. In addition to its support of projects designed to acquire information concerning the biotic and abiotic variables of the Lake Pontchartrain Basin, IBIS is also committed to studies that focus on possible links between the social, cultural, political, and economic history of the region and the degradation of its ecosystem.*

The Institute's objectives are to:

- 1. Increase our basic knowledge and understanding of the biological diversity of the ecosystems which comprise the Gulf Coast, in general and specifically the Lake Pontchartrain Basin, in particular,*
- 2. Identify and investigate the various factors, including environmental, social, economic and governmental that adversely impact the Lake Pontchartrain Basin and recommend countermeasures to enhance its restoration and to sustain its viability,*
- 3. Address the factors that are specifically associated with Katrina/Rita-induced demographic changes, especially as they pertain to the Northshore of Lake Pontchartrain. Examples include the environmental stresses induced by significant increases in population, pollutant loading, land use, and wetland loss. Of particular importance are the effects of development and urbanization in the Pontchartrain watershed on estuary water quality.*
- 4. Foster interdisciplinary activities including research, formal education and outreach components that will provide opportunities for the participants to address environmental and biodiversity issues in a more comprehensive and inclusive manner.*
- 5. Train a new generation of scientists who will continue to address the significant environmental problems that confront society. Furthermore IBIS seeks to train teachers who will disseminate to their students information about ecosystems and the factors that disrupt them.*

6. *Educate citizens of Louisiana about the relationship between human activities and*
7. *Investigate the health of the Lake Pontchartrain Basin and to provide scientific information to policy makers and stakeholders on methods and policies to stabilize, sustain, and/or enhance environmental and economic recovery of the Lake Pontchartrain Basin,*
8. *Initiate and provide quality academic programs that are environmentally relative to the students of Southeastern and provide opportunities to address environmental issues through a broad and diverse internship program and through the expansion of Southeastern's Executive Masters of Business Administration degree program with the establishment of a concentration in Environmental Management.*

The University notes that the objectives of IBIS correlate strongly with the role, scope, and mission of SLU – which is to lead the educational, economic, and cultural development of the southeast region of the state known as the Northshore. As far as academic implications, the administration of SLU is in the process of expanding its Executive M.B.A. degree program by establishing a concentration in Environmental Management through the College of Business and IBIS. In 2007, IBIS established an academic interdisciplinary minor in Environmental Studies.

## **2. Need**

When asked to provide a rationale of need for the Institute, the University stated the following:

*A majority of the environmental issues that currently confront the scientific community are complex and diverse. Consequently, there is often a need to design large, integrated research projects that entail the collaborative interactions of multiple scientists with differing, yet interrelated expertise. A logical approach to the development and operation of such projects is through an institute whose members are unified by a common theme, that of conducting collaborative research in an attempt ultimately to determine and analyze the various threats to biodiversity and to their essential ecosystems and to provide recommendations on the means by which such factors may be minimized or eliminated. An additional challenge to the scientific community is the need to address the critical phenomenon of wetland degradation that is taking place at an unprecedented rate in the Pontchartrain Basin. Scientists at Southeastern Louisiana recognize these significant environmental issues and have responded with the establishment of an institute (IBIS) that is designed to address the threats to biological diversity and to the degradation of wetland ecosystems in southeastern Louisiana.*

*IBIS functions as a viable venue through which researchers with common goals collectively apply for significant research funds through granting agencies and foundations to address, on a large, comprehensive scale, environmental problems. IBIS focuses on habitats within the Lake Pontchartrain Basin that are unique with regard to many of their biological features and that are important both economically and environmentally. Since a significant number of environmental issues require not only*

*scientific analysis, but also political and public support, it is evident that strong educational and outreach activities are integral to the operation and ultimate success of an institute devoted to environmental concerns. Projects supported through IBIS involve a number of collaborative investigators from diverse disciplines, which provides a unique opportunity for the comprehensive investigation of ecologically important regions of the Lake Pontchartrain Basin that are not normally a focus of research. In addition to its basic research component, IBIS provides training for a new generation of scientists, educates the Louisiana public about the relationship between human activities and the health of the Lake Pontchartrain drainage basin, and provides scientifically based recommendations to policy makers and stakeholders.*

*IBIS is committed to meaningful outreach and interdisciplinary educational programs. Southeastern faculty are cognizant of their responsibility to educate and train students who will be civic, business, and political leaders of the future and who will eventually make policies that will impact the environment. To fulfill this responsibility, IBIS has established two academic programs; an interdisciplinary minor in Environmental Studies, and an internship program that is oriented toward environmental science.*

*IBIS and the College of Business will initiate in the 2009 spring semester another academic program, an Executive Masters of Business Administration (EMBA) degree with a concentration in Environmental Management. Of particular importance to the business community is the opportunity to secure an EMBA with a concentration in Environmental Management. A significant number of businesses in southeastern Louisiana are linked economically to the environment, either directly or indirectly. Many are impacted by state and federal regulations and mandates that affect their operation. Leaders in the business community should benefit from the existence of an EMBA program that concentrates on Environmental Management. Not only should the program result in the graduation of business leaders who would be more knowledgeable about state and federal regulations concerning the environment, but a true benefit will be the education of individuals, many of whom are community leaders, who could help inform the populous of southeastern Louisiana about the importance of re-establishing and sustaining sensitive ecosystems regardless of their location in Louisiana or the nation.*

### **3. Faculty**

The following SLU faculty work directly within IBIS:

#### ***Director of IBIS***

*Dr. William Norton, Professor of Biological Sciences*

#### ***Principal Investigators and Specialty: Scientific Research***

*The Edward G. Schlieder Endowed Chair for Environmental Studies, Department of Biological Sciences (the position will be filled during the 2008-2009 academic year)*

*Dr. Kyle Piller, Fish Genetics*

*Dr. Volker Stiller, Plant Physiology*

*Dr. Roldan Valverde, Animal Physiology*

*Dr. Gary Shaffer, Wetland Ecology*  
*Dr. Molly McGraw, Geography*  
*Dr. William Font, Parasitology*  
*Dr. Janice Bossart, Animal Behavior*  
*Dr. Philip Voegel, Environmental Chemistry*

***Principal Investigators and Specialty: Technology Transfer and Education/Outreach Program***

*Dr. Rob Moreau, Environmental Studies and Field Manager of Turtle Cove Environmental Research Station*  
*Dr. Debbie Dardis, Science Education*  
*Mr. Michael Greene, Science Education*  
*Ms. Thais Perkins, Science Communication*  
*Ms. Tiffany Mefalls, Science Communication*

**4. Facilities & Equipment**

The University contends that existing facilities at SLU are sufficient to support the needs of IBIS, and they do not anticipate any need for additional, new facilities, laboratories, minor construction, remodeling, or fixed equipment.

**5. Administration**

From the proposal:

*IBIS is an independent, administrative unit within the College of Science and Technology. A director administers the Institute and reports to the Dean of the College of Science and Technology. A Professor within the Department of Biological Sciences currently receives reassigned time to serve as Director of the Institute. IBIS operates through external grants that have been awarded to the Institute. The administrative office of IBIS is located in room 305 of the new Biology building. The presence of IBIS will not significantly affect the present administrative structure of the campus.*

*There are two advisory committees that guide the programs and activities of IBIS and its Lake Pontchartrain Basin Research Program (PBRP), respectively. The advisory committee for IBIS is comprised of Southeastern faculty and administrators who oversee the Institute, while the members of the Science Advisory Committee for PBRP are not affiliated with Southeastern and represent academia, federal and state agencies, and a foundation.*

## **6. Budget**

The budget for IBIS is as follows:

<b>REVENUE</b>	<b>AY 2008-2009</b>	<b>AY 2009-2010</b>
EPA Grant (covering administrative costs)	\$112,331	\$112,331
EPA Grant (funding Technology Transfer and Education/Outreach costs)	\$40,260	\$40,260
Federal Research Grants	\$353,088	\$190,625
State Grants	\$152,586	\$152,586
Private Industry	\$7,000	\$6,000
University commitment (internal allocation)	\$20,653	\$20,653
<b>TOTAL</b>	<b>\$685,918</b>	<b>\$522,455</b>
<b>COSTS</b>	<b>AY 2008-2009</b>	<b>AY 2009-2010</b>
Administrative Costs	\$112,331	\$112,331
Partial Salary for IBIS Director (institutional funds)	\$20,653	\$20,653
Technology Transfer and Education/Outreach	\$40,260	\$40,260
Research Project Expenditures	\$512,674	\$349,211
<b>TOTAL</b>	<b>\$685,918</b>	<b>\$349,211</b>

With regard to future funding beyond 2010 for the Institute, the University contends:

*Large block grant proposals, as well as individual grant proposals will be continually submitted to federal and state funding agencies throughout the existence of IBIS. The outstanding publication record (38 publications over the 5 years) of the faculty members of IBIS and their success in securing federal grants should further enhance the chances of the Institute acquiring additional grants in the future.*

## **STAFF SUMMARY**

The staff affirms that the purposes and objectives of the Institute are appropriate to the role, scope, and mission of SLU. Cooperation/collaboration across disciplines is evident, and faculty affiliated with the IBIS have been productive. Additionally, facilities and equipment in-place at the University are adequate to sustain Institute activities. Sufficient external funding has been secured to afford current Institute operations through mid-2010, and (as indicated by the University) external funding to afford Institute operations beyond that date will be aggressively pursued.

## **STAFF RECOMMENDATION**

*The staff recommends that the Academic and Student Affairs Committee grant continued approval for the Institute of Biodiversity and Interdisciplinary Studies (IBIS) at Southeastern Louisiana University through June 30, 2010. By that time, the University shall submit a request to the Associate Commissioner for Academic Affairs for continued approval of the Institute, including a progress report detailing Institute activities to-date and external funding secured to afford future Institute operations.*